



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/780,689 | 02/17/2004 | Harold L. Castle | 10541-1986 | 2030 |

7590 11/10/2005
MacMillan, Sobansky & Todd, LLC
One Maritime Plaza
4th Floor
720 Water Street
Toledo, OH 43604-1619

EXAMINER

LEYKIN, RITA

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2837

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,689

Applicant(s)

CASTLE ET AL.

Examiner

Rita Leykin

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,13-19 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13,14,23 and 24 is/are allowed.
- 6) ☒ Claim(s) 1,15,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/15/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to amendment filed on 07/21/05. Applicant's amendment was fully considered. Unfortunately, the amendment did not place the application in the condition for allowance, because new prior art document has been found during additional search required by the amendment.

Claims 1 and 15 have similar limitations, wherein claim 15 is a broader version of claim 1. Applicant amended claim 1, but did not amend claim 15 in his response to the first office action. The grounds for rejection for claims 1 and 15 are identical. It is the examiner's position that limitations in claim 1 and claim 15, as amended are identical. Based on the above, claim 15 in this office action is under final rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 15, 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Hultman US # 4,787,823.

With respect to claims 1 and 15, Hultman teaches structure and control of electromagnetic motor based on principals of interactive magnetic fields to move an armature in both direction of movement, (see col. 2, lines 48-54, col. 3, lines 5-29).

The claimed motor is having a field winding, receives a driving signal and generates a magnetic field is presented in Fig. 1 as follows:

- A primary magnetic field core assembly 12 includes elongated core 14 and a conductor 38 wound around core 14 to form electromagnetic coil 40. The coil 40 produces a magnetic field in response to an electrical signal applied to the ends 42, 44 of conductor 38, from First excitation and control circuit means 46, (see col. 5, lines 1-14). That creates a first magnetic field and causes the rotation of rotor/core 14, as in claims 1 and 15, (see col. 4, lines 40-46);

The claimed field modification module presented in Hultman as described below:

- A metallic diametrically enlarged portion 18 is coupled to the core 14. The enlarged portion 18 receives the threaded end of core 14, (see col. 4, lines 49-58). The enlarged metallic portion 18 is extended around the field winding and represents claimed flux carrier portion;
- A secondary coil 64 produces a secondary magnetic field in response to a second electric signal outputted from the Excitation and control circuit means 62, via ends 58 and 60, (see col. 5, lines 39-48). The coil 64 is a coil of second field winding and is located outside the flux carrier.
- Due to interaction between first and second magnetic fields, as in claims 1 and 15 the motor speed and torque can be controlled via received control signals;

Allowable Subject Matter

3. Claims 23, 24 are allowed.
4. Claims 3-6 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita Leykin whose telephone number is (571)272-2066. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571)272-2107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rita Leykin
Primary Examiner
Art Unit 2837



R.L.